

### Summary Information

Module Code	6301CIV
Formal Module Title	Transportation and Infrastructure
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	10
Academic level	FHEQ Level 6
Grading Schema	40

### Teaching Responsibility

LJMU Schools involved in Delivery
Civil Engineering and Built Environment

### Learning Methods

Learning Method Type	Hours
Lecture	22
Tutorial	11

### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

### Aims and Outcomes

Aims	To develop an understanding of pavement and drainage design to DMRB, traffic flow and junction design, track bed design, switch and crossing layouts, Climate Resilience, SuDS The module will study recent developments within the field of infrastructure, and students will develop an understanding of innovation and entrepreneurship through consideration of case studies.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Implement traffic flow calculations.
MLO2	2	Critically evaluate highway pavement design, track bed and drainage systems.
MLO3	3	Appraise Switch and Crossing layouts and highway junctions.
MLO4	4	Recognise infrastructure as an interdependent system, and relate the importance of resilience, particularly in relation to Climate Change.

### Module Content

Outline Syllabus	Traffic flow theory Traffic Assessment Design for new pavement foundations Design of new pavement construction The design of road drainage Trackbed design Junction design Switch and Crossing layouts The interdependence of infrastructure Climate Resilience Sustainable Drainage Systems (SuDS)
Module Overview	
Additional Information	The module develops the students' understanding of how the different infrastructure sectors are connected, and how that can reduce their resilience to extreme events, particularly in relation to Climate Change. It builds on the highway design taught at level 5 and develops their awareness and their ability to evaluate innovation within Civil Engineering.

### Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Centralised Exam	Examination	100	1.5	MLO1, MLO2, MLO3, MLO4

### Module Contacts

#### Module Leader

Contact Name	Applies to all offerings	Offerings
Stephen Wylie	Yes	N/A

#### Partner Module Team

Contact Name	Applies to all offerings	Offerings